

DOCKET NO.: ABTT-0350/B020660



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of:

Ahmet Yigit and James Pierre

For: REAL TIME MONITORING MANUFACTURING SCHEDULING AND
CONTROL

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

The above identified application is a:

(check one applicable item below)

- | | |
|---|---|
| <input checked="" type="checkbox"/> Original | <input type="checkbox"/> Divisional |
| <input type="checkbox"/> Continuation | <input type="checkbox"/> U.S. National Stage of PCT |
| <input type="checkbox"/> Continuation-in-Part | |

My full name (including family name and at least one given name without abbreviation), full post office address, city and state of actual residence and citizenship are as stated below.

I believe that the named inventor(s) is/are the original, first of the subject matter which is claimed and for which a

- | | |
|--|--|
| <input checked="" type="checkbox"/> Utility Patent | <input type="checkbox"/> Design Patent |
|--|--|

is sought on the invention, whose title appears above, the application of which:

- | | |
|--|------------------------------|
| <input checked="" type="checkbox"/> is attached hereto | |
| <input type="checkbox"/> was filed on | , as U.S. Application Number |
| <input type="checkbox"/> and was amended on | (if applicable) |

☐ was described and claimed in PCT International Application Number _____, filed on _____ and as amended under PCT Article 19 on _____ and/or PCT Article 34 on _____.

I hereby state that I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to the patentability of this application in accordance with 37 CFR § 1.56.

**DISCLOSURE AND/OR CLAIM FOR PRIORITY UNDER
35 U.S.C. §§ 119(a)-(d) OF FOREIGN APPLICATIONS FOR PATENT (OR
INVENTOR'S CERTIFICATE FILED WITHIN 12 MONTHS (6 MONTHS FOR
DESIGN) OF THIS APPLICATION**

I hereby claim foreign priority benefits under Title 35, United States Code §§ 119(a)-(d) of any foreign applications for patent, inventor's certificate or PCT international application designating at least one country other than the United States of America listed below and have also identified below any foreign application for patent, inventor's certificate or any PCT international application designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

Country (or indicate if PCT)	Application Number	Date of Filing (day, month, year)	Priority Claimed Under 37 USC § 119a-d			
			<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
			<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
			<input type="checkbox"/>	Yes	<input type="checkbox"/>	No
			<input type="checkbox"/>	Yes	<input type="checkbox"/>	No

**DISCLOSURE OF FOREIGN APPLICATION(S) IF ANY,
FILED MORE THAN 12 MONTHS (6 MONTHS FOR DESIGN)
PRIOR TO THE FILING OF THIS APPLICATION**

Country (or indicate if PCT)	Application Number	Date of Filing (day, month, year)

**CLAIM FOR PRIORITY OF UNITED STATES APPLICATIONS
OR PCT APPLICATIONS FILED
IN THE UNITED STATES RECEIVING OFFICE
UNDER 35 U.S.C. § 120**

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to be material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

Application No.	Date Filed	Status Patented/Pending/Abandoned

**CLAIM FOR BENEFIT OF PRIOR U.S. PROVISIONAL APPLICATION(S)
UNDER 35 U.S.C. § 119(e)**

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

Provisional Application No.	Filing Date

POWER OF ATTORNEY

- ☒ I hereby appoint all the practitioners associated with Customer Number 23377 (which is the Customer Number assigned to Woodcock Washburn LLP) to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith. Each practitioner associated with Customer Number 23377 is an attorney registered before the United States Patent and Trademark Office.

**23377**

PATENT TRADEMARK OFFICE

- ☐ I hereby appoint the following persons of the firm of WOODCOCK WASHBURN LLP, One Liberty Place - 46th Floor, Philadelphia, Pennsylvania 19103 as attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Attorney/Patent Agent	Registration No.

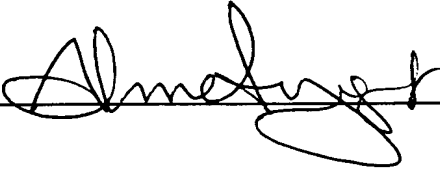
Address all telephone calls, correspondence and maintenance fee correspondence to:

Lawrence A. Aaronson
WOODCOCK WASHBURN LLP
One Liberty Place - 46th Floor
Philadelphia PA 19103
Telephone No.: (215) 568-3100
Facsimile No.: (215) 568-3439

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first joint inventorAhmet

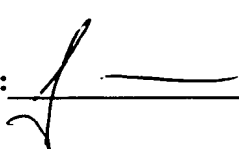
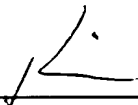
-

Yigit*(Given Name)**(Middle Initial or Name)**(Family or last name)***City/State of Actual Residence:** Raleigh, North Carolina**Mailing Address:**5312 Birchleaf DriveRaleigh, North Carolina 27606**Country of Citizenship:** United States of America**Inventor's signature:****Date:** 7/25/03

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of second joint inventorJames*(Given Name)*

-

*(Middle Initial or Name)*Pierre*(Family or last name)***City/State of Actual Residence:** Marietta, Georgia**Mailing Address:** 2571 Old Orchard Trail
Marietta, Georgia 30062**Country of Citizenship:** United States of America**Inventor's signature:** **Date:** 8/7/2003



SECRET
ABTT-0350

UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

MARCH 16, 2004

PTAS

WOODCOCK WASHBURN LLP
LAWRENCE A. AARONSON
ONE LIBERTY PLACE - 46TH FLOOR
PHILADELPHIA, PENNSYLVANIA 19103-7301



Woodcock Washburn

UNITED STATES PATENT AND TRADEMARK OFFICE
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/20/2003

REEL/FRAME: 014416/0741
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

YIGIT, AHMET

DOC DATE: 07/25/2003

ASSIGNOR:

PIERRE, JAMES

DOC DATE: 08/08/2003

ASSIGNEE:

ABB INC.
CENTENNIAL CAMPUS - NCSU
1021 MAIN CAMPUS DRIVE
RALEIGH, NORTH CAROLINA 27606

SERIAL NUMBER: 10644512
PATENT NUMBER:

FILING DATE:
ISSUE DATE:

RECEIVED

MAR 22 2004

**DOCKET DEPT
WWKMN**

014416/0741 PAGE 2

LAZENA MARTIN, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

08-27-2003



ORDINATION FORM COVER SHEET

PATENTS ONLY

ABTT-0350

To The

102536248

Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

Ahmet Yigit
First AssignorJuly 25, 2003
Date of ExecutionJames Pierre
Second AssignorAugust 8, 2003
Date of Execution

Third Assignor

Date of Execution

Fourth Assignor

Date of Execution

Fifth Assignor

Date of Execution

Sixth Assignor

Date of Execution

Additional name(s) of conveying party(ies) attached? ☐ YES ☒ NO

2. Name and address of receiving party(ies):

Name: ABB INC.

Street Address: Centennial Campus - NCSU
1021 Main Campus Drive

City: Raleigh

State: North Carolina

ZIP 27606

Additional name(s) & address attached? ☐ YES ☒ NO

3. Nature of Conveyance (check only one):

☒ New Assignment☐ Merger☐ License Agreement☐ Security Agreement☐ Change of Name☐ Other:

4. Identification of Application number(s), patent number(s) OR date of execution of application to which assignment refers:

Application Nos.:

10644512

Patent Nos.:

Date application was signed by the first
named executing inventor

July 25, 2003

(Fill-in this date only if assignment is filed
together with a new application)5. Name and address of party to whom correspondence
concerning documents should be mailed:Name: Lawrence A. Aaronson
WOODCOCK WASHBURN LLP
One Liberty Place - 46th Floor
Philadelphia, Pennsylvania 19103-7301
215-568-3100

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$40.00

☒ Enclosed☐ Authorized to be charged to Deposit Account Number
23-30508. Please charge any deficiency or credit any overpayment to
Deposit Account Number 23-3050

DO NOT USE THIS SPACE

9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the
original document.*

Lawrence A. Aaronson/38,369

Name of Person Signing/Reg. No.

Signature

Date

Total number of pages including cover sheet, assignment document and additional pages attached thereto: 4

Mail documents to be recorded with required cover sheet information to:

08/26/2003 LMUELLER 00000151 10644512

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DOCKET NO.: ABTT-0350/B020660

**PATENT
Joint Inventors**

**(Pending Application;
Serial No. Unknown)**

ASSIGNMENT

WHEREAS, we **Ahmet Yigit and James Pierre**, hereinafter referred to as the assignors, residing respectively at **5312 Birchleaf Drive, Raleigh, North Carolina 27606 and 2571 Old Orchard Trail, Marietta, Georgia 30062** are the joint inventors of certain inventions or improvements for which we have made application for Letters Patent to the United States, identified as Case No. **ABTT-0350/B020660**, entitled **REAL TIME MONITORING MANUFACTURING SCHEDULING AND CONTROL**; and

WHEREAS, **ABB INC.**, hereinafter referred to as the assignee, of **Centennial Campus - NCSU, 1021 Main Campus Drive, Raleigh, North Carolina 27606**, a corporation of **Delaware**, is desirous of acquiring the entire right, title and interest in and to the said inventions or improvements and in and to the said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in any and all countries:

NOW, THEREFORE, for and in consideration of our employment by said assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the said assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said assignee, the entire right, title and interest in and to said inventions or improvements and said application and any and all continuations, divisions and renewals of and substitutes for said application, and in, to and under any and all Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and assign to and authorize said assignee, to file in our names applications for Letters Patent in all countries, the same to be held and enjoyed by said assignee, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by us had this assignment, sale and transfer not been made.

AND we hereby covenant that we have full right to convey the entire interest herein assigned, and that we have not executed and will not execute any agreement in conflict herewith, and we further covenant and agree that we will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said inventions or improvements, said application and said Letters Patent to said assignee, its successors, assigns, nominees, or legal representatives, and each of us agrees to communicate to said assignee or to its nominee all known facts respecting said inventions or improvements, said application and said Letters Patent, to testify in any legal proceedings, to sign all lawful papers, to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said assignee, its successors, assigns, nominees and legal representatives to obtain and enforce for

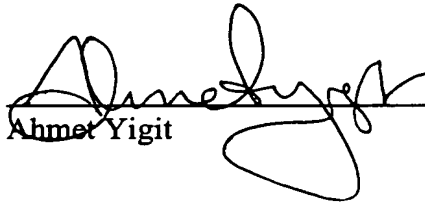
its or their own benefit proper patent protection for said inventions or improvements in any and all countries.

AND we hereby authorize and request the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said assignee, as assignee of the entire right, title and interest, any and all Letters Patent for said inventions or improvements, including any and all Letters Patent of the United States which may be issued and granted on or as a result of the application aforesaid, in accordance with the terms of this assignment.

AND this Assignment may be executed in multiple counterparts, each of which shall be deemed to be an original of this Assignment. Additionally, we hereby authorize our attorneys to collect the signature pages of each executed counterpart and to attach those signature pages to a single copy of this instrument, which single copy and attached signature pages together shall constitute an original of this Assignment.

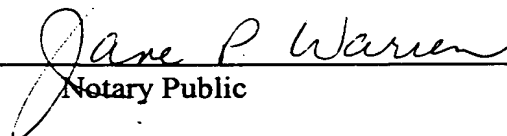
IN WITNESS WHEREOF, we have hereunto set our hands and seals.

7/25/03
Date

 (L.S.)
Ahmet Yigit

STATE OF North Carolina :
COUNTY OF Wake : SS

On this 25th day of July, year of 2003,
before me personally came the above named Ahmet Yigit to me personally known
and known to me to be the same individual who executed the foregoing assignment, and who
acknowledged to me that execution of the same was of that person's own free will for the use
and purposes therein set forth.



Notary Public

MY COMMISSION EXPIRES MARCH 28, 2005.

DOCKET NO.: ABTT-0350/B020660


PATENT
Joint Inventors

8/8/2003
Date

 (L.S.)
James Pierre

STATE OF Georgia :
COUNTY OF Clarke : SS

On this 8th day of August, year of 2003, before me personally came the above named James Pierre to me personally known and known to me to be the same individual who executed the foregoing assignment, and who acknowledged to me that execution of the same was of that person's own free will for the use and purposes therein set forth.


Notary Public

NOTARY PUBLIC, MADISON COUNTY, GEORGIA
MY COMMISSION EXPIRES OCTOBER 27, 2005



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MAR 11 2004

UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

MARCH 16, 2004

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WOODCOCK WASHBURN LLP
LAWRENCE A. AARONSON
ONE LIBERTY PLACE - 46TH FLOOR
PHILA., PA 19103-7301

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RECORDATION DATE: 08/20/2003

REEL/FRAME: 014416/0733
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
ABB INC.

DOC DATE: 08/08/2003

ASSIGNEE:
ABB TECHNOLOGY AG
AFFOLTERNSTRASSE 44
ZURICH, SWITZERLAND CH-8050

SERIAL NUMBER: 10644512
PATENT NUMBER:

FILING DATE:
ISSUE DATE:

RECEIVED

MAR 19 2004

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WWKMN

STEVEN POST, EXAMINER
ASSIGNMENT DIVISION
OFFICE OF PUBLIC RECORDS

08-27-2003



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To The F.

102536247

emarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

8-20-03

ABB INC.
First AssignorAugust 8, 2003
Date of Execution

Second Assignor

Date of Execution

Third Assignor

Date of Execution

Fourth Assignor

Date of Execution

Fifth Assignor

Date of Execution

Sixth Assignor

Date of Execution

Additional name(s) of conveying party(ies) attached? ☐ YES ☒ NO

2. Name and address of receiving party(ies):

Name: ABB TECHNOLOGY AG

Street Address: Affolternstrasse 44

City: Zurich

State: Switzerland

ZIP CH-8050

Additional name(s) & address attached? ☐ YES ☒ NO

3. Nature of Conveyance (check only one):

☒ New Assignment☐ Merger☐ License Agreement☐ Security Agreement☐ Change of Name☐ Other:

4. Identification of Application number(s), patent number(s) OR date of execution of application to which assignment refers:

Application Nos.:

10644512

Patent Nos.:

Date application was signed by the first
named executing inventor

August 8, 2003

(Fill-in this date only if assignment is filed
together with a new application)5. Name and address of party to whom correspondence
concerning documents should be mailed:Name: Lawrence A. Aaronson
WOODCOCK WASHBURN LLP
One Liberty Place - 46th Floor
Philadelphia, Pennsylvania 19103-7301
215-568-3100

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$40.00

☒ Enclosed☐ Authorized to be charged to Deposit Account Number
23-30508. Please charge any deficiency or credit any overpayment to
Deposit Account Number 23-3050

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Lawrence A. Aaronson/38,369

Name of Person Signing/Reg. No.

Signature

Date

8/20/03

Total number of pages including cover sheet, assignment document and additional pages attached thereto: 4

Mail documents to be recorded with required cover sheet information to:

08/26/2003 LMUELLER 00000152 10644512

FC:8921

40.00 05

Mail Stop Assignment Recordation Services
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ASSIGNMENT

WHEREAS, **ABB INC.**, hereinafter referred to as the ASSIGNOR, a Corporation of **Delaware**, having a place of business at **Centennial Campus - NCSU, 1021 Main Campus Drive, Raleigh, North Carolina 27606** holds rights in certain inventions or improvements for which applications for Letters Patent have been made or for which Letters Patent have been issued, all of which are listed on Attachment A hereto (hereafter Patent Property); and

WHEREAS, **ABB TECHNOLOGY AG** hereinafter referred to as the ASSIGNEE, a corporation of **Switzerland**, having the address: **Affolternstrasse 44, CH-8050 Zurich, Switzerland**, is desirous of acquiring the *entire* right, title and interest of ABB INC. in and to the said Patent Property in any and all countries;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said ASSIGNEE, its entire right, title and interest in and to said Patent Property and any and all continuations, divisions and renewals of and substitutes for said Patent Property and to and under any and all additional Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and the full right to sue for and recover all profits and damages recoverable for past infringement of the same, and assign to and authorize said ASSIGNEE to file applications for Letters Patent in all countries, to be held and enjoyed by said ASSIGNEE, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment, sale and transfer not been made.

It is hereby covenanted that ASSIGNOR has full right to convey its entire interest herein assigned, and that ASSIGNOR has not executed and will not execute any agreement in conflict herewith, and ASSIGNOR further covenants and agrees that it will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said Patent Property in said assignee, its successors, assigns, nominees, or legal representatives, and ASSIGNOR agrees to communicate to said ASSIGNEE or to its nominee all known facts respecting said Patent Property, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said ASSIGNEE, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries, all at the expense, however, of said ASSIGNEE, its successors, assigns, nominees or legal representatives.

AND ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said ASSIGNEE, as assignee of the entire right, title and interest, any and all Letters Patent for Patent property, including any and all Letters Patent of the United States which may be

ABTT-0350/B020660

issued and granted on or as a result of any applications included in said Patent Property, in accordance with the terms of this assignment.

IN WITNESS WHEREOF, the undersigned, being properly authorized to execute this Assignment, hereunto sets their hand and seal.

ABB INC.

Date: 8-8-03

By: Robert L. Hirt
Robert L. Hirt

Its: Attorney-In-Fact

STATE OF North Carolina
COUNTY OF Wake SS

On this 8th day of August, year of 2003, before me, the undersigned, personally appeared Robert L. Hirt who acknowledged

himself to be the Attorney-In-Fact of ABB Inc., a corporation, and that he as such Attorney-In-Fact, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Attorney-In-Fact.

Jane P. Warren
Notary Public

MY COMMISSION EXPIRES MARCH 28, 2005.

ABTT-0350/B020660

ATTACHMENT A

U.S. Patent Application:

**Title: REAL TIME MONITORING MANUFACTURING
SCHEDULING AND CONTROL**

Inventors: Ahmet Yigit and James Pierre

Serial No.: not yet assigned

Filing Date: concurrently herewith

Attorney Docket No. ABTT-0350/B020660

3

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UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER
OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

OCTOBER 20, 2003

WOODCOCK WASHBURN LLP
STEVEN B. SAMUELS
ONE LIBERTY PLACE - 46TH FLOOR
PHILADELPHIA, PA 19103-7301



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RECORDATION DATE: 10/20/2003

REEL/FRAME: 014056/0850
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
ABB TECHNOLOGY AG

DOC DATE: 10/13/2003

ASSIGNEE:
ABB RESEARCH LTD.
P.O. BOX 8131
ZURICH, SWITZERLAND 8050

SERIAL NUMBER: 10644512
PATENT NUMBER:

FILING DATE:
ISSUE DATE:

SERIAL NUMBER: 10661846
PATENT NUMBER:

FILING DATE:
ISSUE DATE:

SERIAL NUMBER: 10644371
PATENT NUMBER:

FILING DATE: 08/20/2003
ISSUE DATE:

014056/0850 PAGE 2

SHAREILL COLES, EXAMINER
ASSIGNMENT DIVISION
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Oct-20-03 09:40am

From-WOODCOCK WASHBURN

0/20/2003

+2156883439

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P.02/05

F-731

700048718

RECORDATION FORM COVER SHEET
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To The Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):

ABB Technology AG

October 13, 2003

First Assignor

Date of Execution

Second Assignor

Date of Execution

Third Assignor

Date of Execution

Fourth Assignor

Date of Execution

Fifth Assignor

Date of Execution

Sixth Assignor

Date of Execution

Additional name(s) of conveying party(ies) attached? ☐ YES ☒ NO

2. Name and address of receiving party(ies):

Name: ABB Research Ltd.

Street Address: P.O. Box 8131

City: Zurich

State: Switzerland

ZIP 8050

Additional name(s) & address attached? ☐ YES ☒ NO

3. Nature of Conveyance (check only one):

☒ New Assignment☐ License Agreement☐ Change of Name☐ Merger☐ Security Agreement☐ Other:

4. Identification of Application number(s), patent number(s) OR date of execution of application to which assignment refers:

Application Nos.:

10/644,512

10/661,846

10/644,371

Patent Nos.:

Date application was signed by the first
named executing inventor(Fill-in this date only if assignment is filed
together with a new application)5. Name and address of party to whom correspondence
concerning documents should be mailed:Name: Steven B. Samuels, Esq.
WOODCOCK WASHBURN LLP
One Liberty Place - 46th Floor
Philadelphia, Pennsylvania 19103-7301
215-568-31006. Total number of applications and patents involved: 3

7. Total fee (37 CFR 3.41): \$ 120.00

☐ Enclosed☒ Authorized to be charged to Deposit Account
Number 23-30508. Please charge any deficiency or credit any overpayment to
Deposit Account Number 23-3050

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the
original document.

Steven B. Samuels/Reg. No. 37,711

Name of Person Signing/Reg. No.

Signature

Date

Total number of pages including cover sheet, assignment document and additional pages attached thereto: 5

Mail documents to be recorded with required cover sheet information to:

Mail Stop Assignment Recordation Services
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ASSIGNMENT

WHEREAS, **ABB TECHNOLOGY AG**, hereinafter referred to as the ASSIGNOR, a Corporation of **Switzerland**, having a place of business at **Affolternstrasse 44, CH-8050 Zurich, Switzerland**, holds rights in certain inventions or improvements for which applications for Letters Patent have been made or for which Letters Patent have been issued, all of which are listed on Attachment A hereto (hereafter Patent Property); and

WHEREAS, **ABB RESEARCH LTD.** hereinafter referred to as the ASSIGNEE, a corporation of **Switzerland**, having the address: **P.O. Box 8131, 8050 Zurich, Switzerland**, is desirous of acquiring the *entire* right, title and interest of **ABB TECHNOLOGY AG** in and to the said Patent Property in any and all countries;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over to said ASSIGNEE, its entire right, title and interest in and to said Patent Property and any and all continuations, divisions and renewals of and substitutes for said Patent Property and to and under any and all additional Letters Patent which may be granted on or as a result thereof in the United States and any and all other countries, and any reissue or reissues or extension or extensions of said Letters Patent, and the full right to sue for and recover all profits and damages recoverable for past infringement of the same, and assign to and authorize said ASSIGNEE to file applications for Letters Patent in all countries, to be held and enjoyed by said ASSIGNEE, its successors, assigns, nominees or legal representatives, to the full end of the term or terms for which said Letters Patent respectively may be granted, reissued or extended, as fully and entirely as the same would have been held and enjoyed by ASSIGNOR had this assignment, sale and transfer not been made.

It is hereby covenanted that ASSIGNOR has full right to convey its entire interest herein assigned, and that ASSIGNOR has not executed and will not execute any agreement in conflict herewith, and ASSIGNOR further covenants and agrees that it will each time request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to said Patent Property in said assignee, its successors, assigns, nominees, or legal representatives, and ASSIGNOR agrees to communicate to said ASSIGNEE or to its nominee all known facts respecting said Patent Property, to testify in any legal proceedings, to sign all lawful papers to execute all disclaimers and divisional, continuing, reissue and foreign applications, to make all rightful oaths, and generally to do everything possible to aid said ASSIGNEE, its successors, assigns, nominees and legal representatives to obtain and enforce for its or their own benefit proper patent protection for said inventions or improvements in any and all countries, all at the expense, however, of said ASSIGNEE, its successors, assigns, nominees or legal representatives.

AND ASSIGNOR hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any country or countries foreign to the United States whose duty it is to issue patents on applications as aforesaid, to issue to said ASSIGNEE, as assignee of the entire right, title and interest, any and all Letters Patent for Patent property, including any and all Letters Patent of the United States which may be issued and granted on or as a result of any applications included in said Patent Property, in accordance with the terms of this assignment.

IN WITNESS WHEREOF, the undersigned, being properly authorized to execute this Assignment, hereunto sets their hand and seal.

Date: Oct 13, 2003 For: **ABB TECHNOLOGY AG**
By: Robert L. Hirt
Robert L. Hirt

Its: Attorney-In-Fact

STATE OF : North Carolina SS
COUNTY OF : Wake

On this 13th day of October, year of 2003, before me, the undersigned, personally appeared **Robert L. Hirt**, who acknowledged himself to be the **Attorney-In-Fact** of **ABB Technolgoey AG**, a corporation, and that he as such **Attorney-In-Fact**, being authorized to do so, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as **Attorney-In-Fact**.

Jane P. Warren
Notary Public

MY COMMISSION EXPIRES MARCH 28, 2005.

ATTACHMENT A

U.S. Patent Application:

Title REAL TIME MONITORING MANUFACTURING
SCHEDULING AND CONTROL

Inventors: Ahmet Yigit and James Pierre

Serial No.: 10/644,512

Filing Date: August 20, 2003

Attorney Docket No.: ABTT-0350/B020660

Title: OBJECT-ORIENTED SYSTEM FOR MONITORING FROM THE WORK
STATION TO THE BOARDROOM

Inventors: James Pierre, et al.

Serial No.: 10/661,846

Filing Date: September 12, 2003

Attorney Docket No.: ABTT-0351/B020670

Title: VISUAL BOTTLENECK MANAGEMENT AND CONTROL IN REAL TIME

Inventors: Ahmet Yigit and James Pierre

Serial No.: 10/644,371

Filing Date: August 20, 2003

Attorney Docket No.: ABTT-0352/B020690



To Intellectual Property Authorities, pertinent Courts, and Law Firms handling
Intellectual Property matters of and for the Undersigned

POWER of ATTORNEY

The Undersigned

ABB Research Ltd
Affolternstrasse 52
CH-8050 Zürich
Switzerland

hereby authorises

Robert L. Hirt
c/o ABB Inc.
Intellectual Property, US-RD/IP
1021 Main Campus Drive
Raleigh, NC 27606
USA

to file and prosecute applications for patents, utility models, design patents, trademarks and topographies (in the following referred to as "Intellectual Property Rights") in the name of the undersigned.

Above authorised representative is empowered to undertake all necessary acts for acquiring and maintaining the protection of the Intellectual Property rights sought for and to act as authorised representatives after the grant of said Intellectual Property Rights. In particular, above person is authorised to act before Intellectual Property authorities as Patent- and Trademark Offices as well as before pertinent Courts in all matters of Intellectual Property. Above person is further authorised to nominate authorised representatives for himself/herself. The authorised person is empowered to take back and to assign filed applications as well as granted Intellectual Property Rights.

Any disputes arising hereunder will be governed by Swiss Law and settled before a pertinent court in Zürich, Switzerland.

This power of Attorney replaces all powers of attorney relating to Intellectual Property Rights issued by ABB Research Ltd before January 31, 2002.

Zürich *4 April 2002*

ABB Research Ltd